

## Consumer Acceptance of Irradiated Meat and Poultry in the FoodNet Sites

**Frenzen P**, Buzby J, Majchrowicz A, DeBess E, Hechemy K, Kassenborg H, Kennedy M, Gibbs-McCombs K, McNess A, the EIP FoodNet Working Group

**Background:** Irradiation can reduce or eliminate microbial pathogens from raw meat and poultry products before retail sale. The United States approved the use of irradiation for raw poultry in 1992, and recently approved the use of irradiation for all raw meats. The future effect of irradiation on the incidence of foodborne illness in the United States will depend in part on how many consumers are willing to purchase irradiated meat or poultry products, and on the level of acceptance among those at higher risk of foodborne illness.

**Methods:** A sample of the population of seven sites participating in the Foodborne Diseases Active Surveillance Network (FoodNet) was surveyed by telephone during 1998-99. The area surveyed in seven sites (Connecticut, Georgia, Minnesota, Oregon, and selected counties in California, Maryland and New York) covered nearly 11 percent of the population of the United States. Survey questions included whether respondents would be willing to buy irradiated meat or poultry. The characteristics of potential buyers were assessed using logistic regression.

**Results:** Nearly 50% of adults aged 18 or older were willing to buy irradiated products. Controlling for other variables in the model, those most likely to be buyers included persons with high household incomes ( $> \$30,000$ , odds ratio [OR]=1.4, 95% confidence interval [CI]=1.3-1.5), persons with one or more risky food handling behaviors such as not washing hands after handling raw meat or poultry (OR=1.2, CI=1.1-1.3), and persons who had previously heard about irradiation (OR=1.2, CI=1.1-1.3). In contrast, women (OR=0.8, CI=0.7-0.9) and persons with less education (high school graduate or below, OR=0.9, CI=0.8-0.9) were less likely to be potential buyers. There was no significant difference in willingness to buy irradiated products by age ( $< 60$  years vs. 60 or older), the presence of young children in the household, level of urbanization, or preference for eating rare hamburgers.

**Conclusion:** Nearly half of adults in the FoodNet sites were willing to buy irradiated products. Factors increasing consumer acceptance included high income, risky food handling behaviors, knowledge of irradiation, male gender, and post-secondary education. If actual consumer behavior matches reported dispositions, increasing knowledge about irradiation and the wider distribution of irradiated products is likely to reduce the incidence of foodborne illness. Additional surveys will be needed to monitor trends in consumer acceptance of irradiated products and the effect on foodborne illness.

**Suggested citation:**

Frenzen P, Buzby J, Majchrowicz A, DeBess E, Hechemy K, Kassenborg H, Kennedy M, Gibbs-McCombs K, McNess A, and the EIP FoodNet Working Group. Consumer Acceptance of Irradiated Meat and Poultry in the FoodNet Sites. 2nd International Conference on Emerging Infectious Diseases. Atlanta, GA, July 2000.